

REMARKS

Examiner Alexander is thanked for the courtesy of an interview, which was held on June 9, 2003. The above amendments are submitted in response to the Office Action dated April 8, 2003 and in accordance with the claim amendments discussed during the interview. Entry of the amendments and allowance are requested.

Claims 25-42 and 44 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,025,200 to Kaish et al. ("Kaish"). Additionally, claims 36-44 are rejected under 35 U.S.C. 103(a) as being obvious in view of Kaish.

In the currently pending Office Action, the Examiner cites Kaish for the first time, presumably in response to Applicants' previous claim amendments which included limitations to a look-up table. As the Examiner states,

Kaish et al. teaches a method and apparatus for the detection of tagged objects. In column 8 lines 40+ a system is taught that compares an IR spectra from a sample and compares it to a "library" of spectra to determine the identity of the sample.

The Examiner's focus on Kaish because of the disclosure of a "library" is mislead. In fact, Kaish completely fails to teach or disclose the present invention and the limitations of claim 25.

Claim 25 has been amended to more clearly define the Applicants' invention by specifically claiming an apparatus which detects concentration ratios and uses those ratios to identify a liquid. Unlike prior art detectors, which detect the *presence* of a substance or a mixture of substances, the applicants' invention measures the relative concentration of two or more markers and uses the concentration *ratio* of the two or more markers to identify a liquid.

Prior art references, such as Kaish, mark objects by assigning each composition an identity. If the presence of the composition is detected then the object is identified, conversely, if the presence of the composition is not detected then the object is not identified. For example, an object could be marked with a mix of composition A and composition B. For a prior art

detection device to identify the object, the detector would have to detect the presence of composition A and B. The only two possibilities are that either A and B are present and the detector recognizes the object, or A and B are not detected and the device does not recognize the object.

The drawback of such a system is that in some cases there are a very limited number of available markers (e.g. only A and B). The present invention overcomes this prior art limitation by providing an apparatus which can identify numerous marked liquids using a minimal number of markers.

The present invention provides a detector to detect markers having a predetermined *concentration ratio*, instead of just the presence or absence of a marker. The claimed apparatus includes a detector for detecting the plurality of markers and for generating signals indicative of relative concentration of each of the markers. The signal defines a measured concentration *ratio*. The claims further require, a look-up table which stores a plurality of known concentration ratios, each concentration ratio corresponding to the signal from a specific combination of the plurality of markers at the predefined relative concentrations. The prior art fails to teach or disclose these limitations.

The Kaish reference is directed to tagging and detecting of various objects such as illicit drugs, crops, chemical compositions, currency, people, vehicles and currency. The objects are "tagged" with a volatile compound such a Perfluorocarbon Tracer ("PFT"). Subsequently, the presence or proximity of the object is detected by detecting the *presence* of the PFT. Nowhere does Kaish disclose the use of a concentration ratio, or detectors capable of detecting a concentration ratio, or a look-up table containing concentration ratios, or a pattern comparison element capable of comparing ratios. Although Kaish discloses a library, as noted by the Examiner, the library does not contain known concentration ratios corresponding to the signal from a specific combination of the plurality of markers at a predetermined relative concentration. In fact the library of Kaish is only disclosed to contain, "known environmental data, as well as empirical data about the taggants of interest." At best, Kaish and other such prior art references

detect the presence of a mixture of taggants, and as a result they completely fail to disclose the claimed structures for identifying liquids marked with concentration ratios.

In summary, claim 25 of the present invention contains patentably distinct structural limitations which are neither anticipated nor rendered obvious by Kaish. In addition, each of the dependent claims is patentable at least because it depends on allowable independent base claim 25. Reconsideration of the rejection in view of Applicants' arguments is respectfully requested.

CONCLUSION

This response has been filed prior to the three month deadline, as such no fee is believed due. Please charge any additional fees, or credit any overpayment, to Deposit Account No. 141449.

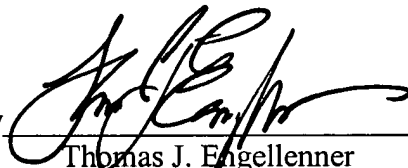
The Examiner is urged to telephone the undersigned Attorney for Applicants in the event that there are any remaining issues.

Respectfully submitted,

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By



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